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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/396,569	09/15/1999	CORNEL IVANESCU	99-129	7625

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EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

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DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/396,569

Applicant(s)

IVANESCU ET AL.

Examiner

Hien Tran

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,3-13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3-13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 17 September 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on 17 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "line 3-3" (page 5, line 20); "306" (page 7, line 17); "327" (page 9, line 17). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "212, 208" (page 9, lines 3-4). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

On page 5, line 20 it is unclear as to where the "line 3-3" is shown in the drawings.

On page 9, line 3 "212" should be changed to --214--; in line 4 "208" should be changed to --210--.

Appropriate correction is required.
4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

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Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 11-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, line 9 it is unclear as to which conically shaped catalyst is implied. See claims 13, 15, 16, likewise.

In claim 14, line 2 "catalyst" should be changed to --catalysts--. See claim 21, line 6 likewise.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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9. Claims 1, 3, 5-7, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al (5,144,800) in view of Maus et al (5,103,641).

Shioya et al disclose a catalyst system comprising: a shell with at least one conduit, e.g. 8, 9; a plurality of first catalysts 11, 12 disposed contiguous to the exhaust port of the engine and a main catalyst 13 disposed downstream of the first catalysts 11, 12.

As best understood, the apparatus of Shioya et al is substantially the same as that of the instant claims, but fails to disclose the specific shapes for the catalysts.

However, the shape of the catalysts is not considered to confer patentability to the claim. It would have been an obvious matter of design choice to select an appropriate shape for the catalysts, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

In any event, Maus et al discloses provision of a conically shaped catalyst 24; and a main brick catalyst 23 having an angled front face disposed downstream of said conically shaped catalyst 24 (Fig. 2).

It would have been obvious to one having ordinary skill in the art to select an appropriate shape for the first catalyst, such as conical shape, in the apparatus of Shioya et al so as to provide a uniform oncoming flow to the upstream side of the main catalyst as taught by Maus et al.

10. Claims 4, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al (5,144,800) in view of Maus et al (5,103,641) as applied to claims 1, 3, 5-7, 9 above and further in view of Gottberg et al (5,996,339).

With respect to claim 4, Gottberg et al discloses that the angle between the rear face of the first catalyst and the angled front face of the second catalyst is acute.

It would have been obvious to one having ordinary skill in the art to position the first and second catalysts in the apparatus of Maus et al so as the angle therebetween is acute as taught by Gottberg et al on the basis of its suitability for the intended use as a matter of obvious design choice and for a more effective purification thereof.

With respect to claim 8, as best understood, the apparatus of Maus et al is substantially the same as that of the instant claim, but fails to disclose whether the main brick catalyst may be ceramic.

However, Gottberg et al discloses a second ceramic catalyst 2 disposed downstream of a first metal catalyst 1.

It would have been obvious to one having ordinary skill in the art to select an appropriate material for the catalysts, such as first metal catalyst and second ceramic catalyst as taught by Gottberg et al in the apparatus of Maus et al on the basis of its suitability for the intended use as a matter of obvious design choice, as such is conventional in the art and no cause for patentability here.

11. Claims 11-13, 15-17, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al (5,144,800) in view of Maus et al (5,103,641), Gary (3,189,418) and GB 1,455,351.

The same comments with respect to Shioya et al and Maus et al apply.

Gary and GB patent disclose the conventionality of providing a catalyst having a front face including a plurality of angled surfaces.

It would have been obvious to one having ordinary skill in the art to provide a main catalyst with a front face including a plurality of angled surfaces as taught by Gary and GB patent in the modified apparatus of Shioya et al for increasing the purification effectiveness of the catalyst.

12. Claims 11-17, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al (5,144,800) in view of Maus et al (5,103,641), Gary (3,189,418) and GB 1,455,351 as applied to claims 11-13, 15-17 and 19 above and further in view of Gottberg et al (5,996,339).

The same comments with respect to Gottberg et al apply.

Response to Arguments

13. Applicant's arguments filed 9/17/02 have been fully considered but they are not persuasive.

Applicants argue that in Shioya et al, the housing for the conically shaped catalyst is attached to the manifold and therefore is not contiguous to the engine and does not circumscribe the exhaust port as required by the instant claims. Such contention is not persuasive as Shioya et al does disclose the catalyst, e.g. 11, 12, that is disposed contiguous to the exhaust port of the engine and at least one conduit housing the catalyst is attached to the engine and circumscribe the exhaust port (Fig. 1). The fact that the at least one conduit is attached to the manifold is irrelevant as the language "comprising" opens the instant claim to the inclusion of such.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Foster, Abthoff et al are cited for showing state of the art.

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15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

HT
December 1, 2002

Hien Tran
Hien Tran
Primary Examiner
Art Unit 1764